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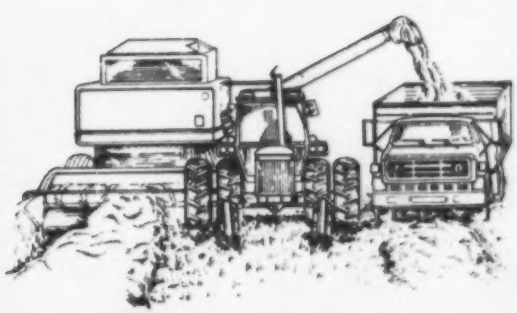
CASH RENT OF GRAINLAND What's Affordable?



CASH RENT OF GRAINLAND What's Affordable?

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Introduction

Land is essential to most types of farming. The decision to rent or buy farmland, the timing, and the type of arrangements made are important factors in the success of a farm. Renting land is very common in Saskatchewan. In 1981, the Census of Agriculture revealed that 40 percent of farmers rented part of their land base and that 9 percent rented all their farm. The remaining farmers, 51 percent, owned all their land. Renting of farmland has not always been as prevalent. In the early years of settlement in Saskatchewan most land was farmed by the owners of the land. However, changes over time have resulted in increased absentee ownership of farmland. Since the end of World War II a fairly constant proportion of farmland, about one-third of cultivated land, has been rented.

Crop share and cash rent are the two basic types of land rental arrangements. Crop share is the traditional method of land rent, but cash rent is becoming more common in many areas of the province. The purpose of this publication is to provide information on the advantages and disadvantages of cash rental arrangements. It contains worksheets to be used in calculating cash rental offers.

Cash Renting or Buying Farmland - Which is Best?

This section discusses the pros and cons of renting versus buying farmland. This choice is critical to the success of a farm. The best alternative is not always obvious or available. Although nearly one-third of all cultivated land in Saskatchewan is rented, most of this land is not readily available for sale or rent. Many land rental arrangements are between family members or friends and these tend to be longer-term agreements. Many long-term agreements are also crop share rent agreements. As a result there is often intense competition for any land that is available to rent on a cash basis.

Purchasing land is often the only alternative available to establish or expand a farm. Most farmers desire to own all or a substantial portion of their farm due to the security of operation associated with land ownership. What are some of the advantages to a farmer of either buying or cash renting farmland?

Cash Rent

1. Allows a tenant to begin or expand a farm without any large investments for land.
2. A larger land base may permit a farmer to spread investment in machinery and buildings over a larger area, thereby reducing per unit costs of production.
3. Rents are often lower than the cost of purchasing land.
4. A tenant has more flexibility to reduce farming operations if other alternatives are more attractive.
5. A tenant does not bear the risk of capital loss from reduced land prices.

Land Purchase

1. An owner has the right to use the land in any manner desired.
2. Owned land provides security of tenure.
3. There may be opportunities for capital gains from increased land values in the future.
4. Long term production plans are possible, such as land reclamation projects or extended rotations.
5. Security of tenure permits, maintenance of an ideal complement of buildings and machinery with confidence.

The Value of Land – Renting or Buying

The value of land is important to owners and renters of land. Renters are primarily interested in the productive value of land because of their short tenure. Owners of land are concerned with the market value of land. Most owners are interested in realizing a return from their land which is as close as possible to the opportunity cost of the land.

A major objective of all rental agreements is to provide a legal basis for the division of income from the rental property. Rental payments represent the return to ownership of the land. For this reason, it is necessary for owners and renters to agree upon the value of the land involved and the method of determining a fair return to land ownership.

Productive and Market Land Values

Productive land values are usually determined on the basis of short-term returns and costs of farming. Market land values are almost always considerably above productive values. There are several reasons for this which are pertinent to renters of land:

- Buyers may attach an additional value to land in expectation of future capital gains.

- The costs to expand a farm (marginal costs) may be lower than average farm costs. There is a wide range of costs for both potential buyers and renters. Land values are established on the basis of the costs and returns of the highest bidder.

- Land buyers have a longer investment cycle than land renters, and may choose to accept short-term losses in the expectation of future profits.

A farmer who is considering renting should realize that his tenure does not extend beyond the end of a lease. As a result, rental rates can be calculated only on the basis of short-term profits. Renters are only concerned with the amount of grain which can be produced and the costs involved in this production. Land owners must also be concerned with the cost of borrowing and returns from capital gains. In summary, when comparing land renting to land values the following factors should be considered:

- Gross returns
- Short and long-term marginal costs
- The value of future capital gains
- The cost of borrowing

Calculating Rental Rates and Productive Land Values

	Per Cultivated Acre
Production	20 Bushels
Price of Grain	$ 4.00
Value of Production	$80.00
Cost of Production	$70.00
Net Return (Rental Rate)	$10.00

$$\text{Productive Land Value} = \frac{\text{Net Return}}{\text{Current Interest Rates}} = \frac{\$10.00}{8\%} = \$125.00/\text{acre}$$

The market value of the land in the example will be determined by supply and demand and will vary depending on where it is located. It is quite characteristic for market land values to be above the calculated productive value of land. In the worksheets in this bulletin an estimate of market land values is used to calculate owners costs.

Cash Rent Compared to Crop Share Rent

In recent years farming has been characterized by increased costs, reduced margins, greater productivity and increased competition for rented land. All these factors have resulted in more cash rental agreements and fewer crop share agreements.

Farmers have responded to increased farm costs by attempting to produce more and using a higher level of crop inputs. Under a traditional one-third crop share agreement the landowner will benefit from this higher level of inputs but the tenant may not. In the following example, a high cost, productive farm has the highest net return, but this farm returns the least to the tenant under a crop share agreement.

	Low Return Low Cost Farm	High Returns High Cost Farm
A. One-Third Crop Share Rent		
Gross Returns	$90	$150
Costs	45	90
Net Returns	45	60
One-Third Share Rent	30	50
Returns to Tenant	$15	$10
B. Cash Rents		
Gross Returns	$90	$150
Costs	45	90
Net Returns	45	60
Cash Rent	25	35
Returns to Tenant	$20	$25

In these examples crop share renting is not feasible in a high returns-high cost area. Also illustrated is the fact that cash rents tend to be lower than equivalent crop share rents in the same areas. This is because landowners have a much lower risk under cash renting and accept lower levels of returns on average for this benefit. There are other advantages and disadvantages to cash renting compared to crop share as follows:

Advantages

Cash Rent

1. Decision-making for a tenant is similar to that for owned land.
2. Tenant receives the benefit of above average yields or prices.
3. No need for the landlord to be involved in the operation of the farm.

Crop Share

1. Capital requirements for crop share renting are very low since no rent is paid until the crop is sold.
2. Low cost summerfallow rotations are usually most profitable.
3. Owner and tenant share the risk of crop failures.

Disadvantages

1. Rents is usually paid in advance, regardless of level of production.
2. Rent agreements are usually short term often one year.
3. Tenant assumes all risks for production losses and price uncertainty.

1. Above average yields and prices must be shared with the owner.
2. Owner may not agree with farming practices and level or type of inputs used.

Types of Cash Rent Agreements

A cash rent agreement is one in which the tenant agrees to pay a predetermined sum of money to a landowner to receive in turn the entire production from the rented land for a specific period. The major variables in a lease relate to factors such as the length of the lease, management practices, and timing of rent payments. Other bulletins prepared by Saskatchewan Agriculture contain information on legal and tax implications of various land rental agreements.

There are several methods of calculating payments for cash rent agreements.
They are:

- a tenant's budget
- owner's costs
- the contributions approach
- equivalent to crop share
- market rents and breakeven yields

Each of these approaches is explained in the following sections along with instructions for completing a worksheet to calculate rental rates.

A Tenant's Budget

A tenant's budget is simply a process of calculating the returns and costs to a tenant for a particular piece of land, and estimating the amount which is available for rent payment. The example farm budget shows costs and returns for an average Saskatchewan farm and is intended only as a guide to completing the worksheet.

Instructions

Line

A,B,C The length of rotation, types of crops grown and average yields are used to calculate gross returns per cultivated acre. Yields and rotations used should be similar to practices used on existing land or in the same area. Avoid the inclusion of longer rotations or over-optimistic yields to justify higher rental rates. Crop insurance yield levels may provide an indication of minimum rent bids which can be considered.

D,E Price estimates can be difficult particularly for longer leases. For this reason short term leases may be preferable, or the rental rate may be negotiated each year. During high price periods current prices could be discounted by a risk factor such as ten percent. This will reduce the risk of losses due to reduced prices.

F The yields and rotations used above will partly determine the level of crop inputs required. The costs in the example farm are the average costs incurred in 1985 on 463 farms surveyed in Saskatchewan. The costs on the leased farm may vary due to different farming practices. The costs are shown on a cultivated acre basis. Your costs can be converted from a seeded acre basis to a cultivated basis by multiplying by the percent of land cropped. For example, chemical costs of $10.00 per seeded acre would be equivalent to $6.66 per cultivated acre on a two-thirds rotation
$10.00 x 2/3 = 10.00 x .66 = $6.66

Costs for taxes, building repairs and certain custom work may be the landlord's responsibility.

G,H The additional machinery investment required to add a piece of leased land to an existing farm may be quite low. The amount of additional equipment required will depend on the amount of equipment presently owned and the size of the planned expansion.

I,J Depreciation costs for machinery will definitely increase when more land is rented. In general, depreciation will increase in proportion to the increase in acreage. Depreciation is calculated by multiplying total investment by a rate of depreciation, such as 15 percent, based on the useful life of machinery. Even if no additional machinery is required, existing machinery will wear out faster. The average investment of farms in the survey was $126.00 per acre. Larger farms have lower than average machinery investment per acre, and farms with longer rotations have higher investment.

K,L,M Net returns are calculated by subtracting total cash costs and machinery costs from income. Building costs are assumed to be a responsibility of the landlord.

N,O,P The total bid is determined on the basis of the number of acres to be rented. An adjustment for a return to labour is required. The return to labour may be based on the amount of time required for the additional land and the opportunity cost of an individual's time.

Tenant's Budget Worksheet

		Example Farm	Your Farm
Income			
A. Yield per Crop Acre (bu.)		30	
B. Percent of Land Cropped		.66	
C. Yield per Cultivated Acre (A x B)		20	
D. Expected Price (per bu.)		$ 4.50	
E. Income per Cultivated Acre (C x D)		$90.00	
Costs (per cultivated acre)			
Chemicals		$ 6.27	
Fertilizer		8.16	
Seed		4.00	
Fuel and Lubricants		7.88	
Equipment Repair		7.33	
Building Repair		1.12	
Taxes		2.98	
Custom Work		1.79	
Hired Labour		4.22	
Machinery, Building & Crop Insurance		3.34	
Operating Interest		1.55	
Miscellaneous		1.20	
F. Total Cash Costs		$51.26	
G. Additional Machinery Required (List Here)	Value		
Example: Stonepicker	$ 7,000.00		
Total	$ 7,000.00		
Divide by Acres to Rent = $7,000.00 / 160 =	$ 43.75		
H. Additional Machinery Investment Cost (G x 10%)		4.38	
I. Total Machinery Investment	$126.00		
J. Machinery Depreciation (I x 15%)		18.90	
K. Total Machinery Costs (H + J)		$23.23	
L. Total Farm Costs (F + K)		$74.54	
M. Net Return (E – L)		15.46	
N. Acres to be Rented		160	
O. Total Net Income (M x N)		$2,473.60	
P. Desired Labour Returns		1,000.00	
TOTAL AVAILABLE FOR CASH RENT (0 – P)		$1,473.60	

NOTE: Costs are based on expenses and investment for all farms in the 1985 Farm Business Analysis, Grain Enterprise, Saskatchewan Department of Agriculture.

An Owner's Costs Budget

An owner's costs budget is used to determine the costs which the owner of farmland incurs when the land is rented out.

Instructions

Line

A In a cash lease, crop inputs are the tenant's responsibility.

B,C,D These costs are normally a responsibility of the owner.

E Crop and hail insurance are the tenant's responsibility.

F Other costs may include any unusual costs such as draining, clearing, building removal or other major improvements.

H. The major costs for an owner of land are the opportunity costs for the land itself. These costs represent the return an owner would receive if land were sold and the returns reinvested at commercial rates. The land values should be based on market values for comparable land sales in the area.

I,J Interest rates are a major determinant of investment returns. However, in the past a major return to land has been from increases in land values. Generally land owners cannot expect to receive the total return on investment from rent, since some return is received from capital gains. The only way a land owner can receive the full investment rate received on deposits is by actually selling the land. The competitive rate for rented land is composed of rental returns plus capital gains as expressed in the following formula:

Rental Returns = Interest Rates on Deposits - Capital Gains Rate

E.G. = 8% – 4% = 4%

K,L,M Building investment of $42.00 is based on the Saskatchewan Farm Business Summary. An owner can expect to receive a return equal to the market value of buildings on his land at commercial interest rates, to the extent that the buildings are required by the renter.

N,O Building depreciation represents the real decline in market values which occurs with buildings while the land is rented. In most cases the rate of depreciation would be very low.

P,Q,R The owner's total costs are calculated by adding cash, investment and depreciation costs. These costs are multiplied by the acreage involved to determine the total rent desired.

Owner's Costs Worksheet

	Example Farm	Your Farm
Cash Costs (per cultivated acre)		
A. Crop Inputs	none	
B. Building Repairs	1.12	
C. Taxes	2.98	
D. Building Insurance	.42	
E. Crop Insurance	none	
F. Other Costs	none	
G. Total Cash Costs (A to F)	$4.52	
Investment and Depreciation Costs		
H. Land Value per Acre	$400.00	
I. Interest Rate	4%	
J. Land Investment Cost (H x I)	16.00	
K. Buildings Investment per Acre	42.00	
L. Interest Rate	10%	
M. Building Investment Cost (K x L)	$4.20	
N. Depreciation Rate	5%	
O. Building Depreciation (K x N)	$2.10	
P. Total Investment & Depreciation (J + M + O)	22.30	
Q. Total Owner's Costs (P + G)	26.82	
R. Acres to Rent	160	
Total Cash Rent Required (Q x R)	**$4,291.20**	

Cash Rent Based on the Contribution Principle

The two previous worksheets on cash rent reveal an obvious problem: What the land owner views as a competitive rent and what the tenant can afford to pay are often far apart. The contribution principle is a method of reconciling these differences in an equitable manner.

Instructions

Section

A The costs calculated for owners and tenants in the previous worksheets are entered here to determine total costs for both parties.

B,C Tenant's and owner's costs are calculated as a portion of total costs, and these percentages are used to divide income.

D Actual cash rent is determined by multiplying an estimate of annual income by the owner's share.

E Total rent is determined by multiplying the owners share per acre by the total acres to be rented.

F A net cash income can be calculated by deducting cash costs and rent payments from total income. This is the amount which is left to cover investment, depreciation and labour costs.

Contributions Worksheet

	Tenant Costs		Owner's Costs	
	Example	Your Farm	Example	Your Farm
A. **Costs** (per cultivated acre)				
Cash Costs	$51.26		$4.52	
Land Investment	-		16.00	
Machine - Investment	4.38		-	
- Depreciation	18.90		-	
Building - Investment	-		4.20	
- Depreciation	-		2.10	
Total Costs	$74.54		$26.82	

B. Tenant's Share of Costs = $\frac{\text{Tenant's Cost}}{\text{Tenant's + Owner's Costs}} \times 100 = \frac{\$74.54}{74.54 + 26.82} \times 100 = 73.5\%$

C. Owner's Share of Cost = $\frac{\text{Owner's Costs}}{\text{Tenant's + Owner's Costs}} = \frac{\$26.82}{74.54 + 26.82} = 26.5\%$

D. Cash Rent per Acre = Average Income x Owner's Share = $90.00/acre x 26.5% = $23.85/acre

E. Total Rent = Acres to Rent x Rental Rate

= 160 x $23.85

= $3,816.00

F. Tenant's Net Cash Income

= Total Income	$90.00
Less - Cash Costs	51.26
- Rent Payment	23.85
= Net Cash Income	14.89

Cash Rent Equivalent to Crop Share

This worksheet provides a method of determining what amount of cash rent would be equal to various common types of crop share rental arrangements.

Instructions

Section

A This section uses estimates of yields and prices to calculate expected gross income per acre.

B The estimated gross income is multiplied by commonly used landlord shares to determine what level of cash rent would be equal to the crop share.

If the cash rent has been determined by other means, this process can be reversed to determine what equivalent crop share the owner will be receiving with average yields and prices.

Break-Even Yields

Sometimes land is available for rent at a specified amount. The purpose of this worksheet is to calculate the yield which is necessary to generate sufficient income to cover costs of production, rental payments and provide a return to labour.

Instructions

Line

A The amount of rent required for a parcel of land.

B The minimum return which a tenant would accept from the rented land.

C,D,E The total of cash rent and labour returns provides an estimate of returns above costs (profits) required for the rented land.

F,G Required net returns plus costs equals total income required to break even.

H,I Division of the breakeven income requirement by estimated grain prices provides a breakeven yield per cultivated acre.

J,K Convert yields from cultivated to crop acres by dividing by the percent of land cropped.

Equivalent to Crop Share

	Example Farm	Your Farm
A. Cash Costs		
Yield per Crop Acre	30 bu.	
Percent of Land Cropped	.66	
Yield per Cultivated Acre	20 bu.	
Expected Price	$4.50	
Income per Cultivated Acre	$90.00	
B. Cash Rent at Various Crop Shares		
One-Third Crop Share (.33 x $90.00)	$29.70	
40% Crop Share (0.4 x $90.00)	36.00	
50% Crop Share (0.5 x $90.00)	45.00	
C. Total Rent		

Land to be Rented x Rental Rate

Example: 160 x 29.70 = $4,752.00
160 x 36.00 = $5,760.00
160 x 45.00 = $7,200.00

Break Even Yields Worksheet

	Example Farm	Your Farm
A. Cash Rent	$2,500.00	
B. Desired Labour Return	1,000.00	
C. Required Net Returns	3,500.00	
D. Total Cultivated Acres to Rent	160	
E. Required Net Returns (per cultivated acre) (C – D)	$21.88	
F. Tenant's Estimated Costs	74.54	
G. Total Income Needed (E + F)	$96.42	
H. Expected Price per Bushel	$ 4.50	
I. Yield Required per Cultivated Acre (G – H)	21.4	
J. Percent of Land Cropped	.66	
K. Yield Required per Crop Acre (I ÷ J)	32.1	

Summary Sheet - Rental Calculations
(Rents shown per Quarter Section)

	Example Farm	Your Farm
1. Tenant's Budget		
Total Available for Cash Rent	$1,473.60	
2. Owner's Costs		
Total Rent Required	$4,291.20	
3. Cash Rent Based on Contributions		
a. Owner's Share of Costs	26.5%	
b. Total Rent	$3,816.00	
4. Rent Equivalent to Crop-Share		
a. One-Third Share	4,752.00	
b. Forty Percent Share	5,760.00	
c. One-Half Share	7,200.00	
5. Break-Even Yield		
Yield Required per Crop Acre (bu.)	32.1	

Conclusion

The preceding discussion and worksheets should provide prospective tenants and landowners with a good indication of the costs, returns and potential profitability for rented land. Most likely the worksheets will show a wide variation in level of cash rent depending on the approach to rent calculation. The actual level of rent agreed upon will of necessity be a compromise between the tenant and landowner. Some additional factors which could be considered when determining the level of cash rent are as follows:

1. The Goals and Strategies of a Tenant-Farmer

A farmer's personal goals are often important factors in the decision to rent farmland. It may be difficult to place a monetary value on long-term goals, even though personal objectives are often used to justify paying uneconomic rents in the short-term. A farmers' goals may also involve a strategy with regard to farm size, expansion and income security. A farmer may have specific objectives to create a viable farm unit. Renting is often seen as a short-term alternative to the purchase of the same land.

Some personal factors to consider when renting land are age, retirement plans, future family involvement, labour availability and alternative opportunities.

2. Locations

The location of the land to be rented relative to the home farm is important. Ideally rented land would be located adjacent to land already farmed. This would minimize costs of moving equipment and also facilitate management of the rented land. Location of the land to markets, accessibility and condition of roads also affect the cost of farming.

3. Productivity and the Condition of the Land

Productivity is a key concern when deciding what to pay for cash rent. Productivity of land will affect both yields and the costs of farming. Highly productive land provides a higher net income than poor land, and economic rents increase proportionately more as yields increase and costs decline.

Quality of land may not be accurately reflected in municipal assessments or by Crop Insurance ratings. Usually some personal knowledge of the land to be rented, or the opinions of impartial observers is a valuable adjunct to productivity ratings.

The amount of farmable land on a rented parcel influences the level of rent. The presence of waste land can increase fixed costs per seeded acre quite dramatically. The amount and location of waste land can also increase costs on the cultivated land through smaller fields and poor field access. The intended use of the land for alternative crops or livestock should be considered. Waste land to a grain farmer may be an asset to a livestock farmer.

Some of the major factors to look for on rented land are, the presence of expensive weeds, salinity, stones, field size and shape, waste land such as sloughs, gullies, right-of-ways, and past wind or water erosion.

4. Availability of Building

The condition and availability of buildings can affect cash rent. Usually sufficient grain storage for an average crop is considered a normal part of land rental. If no grain storage is available the rent bid should be reduced accordingly. Similarly, the availability of other buildings, which are needed, such as a house or machine storage may be cause to increase the rent.

5. Equipment Requirements

The availability of excess machinery is probably the most common reason used to justify renting extra farmland. However, when extra machinery is available, the added machinery costs on rented land are only postponed. There are always additional machinery costs when more land is farmed, but the costs may not be apparent and may not affect cash flow for several years. This is because there are two components to machinery costs, investment and depreciation. Investment costs are the interest paid when money is borrowed to purchase machinery, or the interest lost when cash is invested in farm machinery.

Depreciation costs are the actual cash invested in machinery which will wear out; or in the case of borrowed money, depreciation costs are the principal which must be repaid.

If a farmer has sufficient machinery to farm the additional rented land, then machinery investment costs will not increase, but the machinery will wear out faster due to its use on additional land and will require replacement sooner. than would be the case otherwise. Thus, current cash flow may not be affected due to machinery costs, but additional principal payments or cash investments may be required in future years.

The exception to this situation would be where a specific machine such as a rockpicker is required due to the rental of a piece of land. In this case, the cost of the machine should be included in rent calculations.

6. Terms of the Lease

The terms of the lease also influence the level of cash rent. Possible factors are length of the lease, cropping rotation, option to purchase, upkeep of buildings, removal of straw and condition of land or amount of summerfallow to be left at the end of the lease. All these conditions affect bidding strategies.